

ORION

TV-3880

MODEL

SERVICE MANUAL

### **Service Notes**

After a repair the cables must be laid out as originally fitted to save compliance with original approval and to avoid failures or disturbances.

The mains cable prevents interference from the mains supply and is part of the product approval. For replacement the original spare part only must be used.

### **Note di servizio**

Dopo una riparazione i cavi devono essere disposti come posizionati all'origine per mantenere la corrispondenza con le approvazioni originali ed evitare guasti o disturbi.

Il cavo di alimentazione previene interferenze provenienti dalla rete elettrica ed è parte delle approvazioni del prodotto. Per la sostituzione deve essere utilizzato esclusivamente il ricambio originale.

## Professional 4400 Chassis service procedure

### Power module

Use PP1 to select  $154V \pm 0.5V$  for 4:3 tubes and  $151V \pm 0.5V$  for 16:9 tubes at the CP28 terminals.

### Activating service mode

1. Switch on the appliance while holding down the **MENU** key at the cabinet controls until the red LED lights up.
2. Release the **MENU** button at the cabinet and press the **standby** button on the remote control; the appliance will default to programme 1 or to AV1 if pin 8 of SCART 1 is connected to a voltage of +12 V. It is therefore important to make certain that the test signal needed to make the adjustments is available either on programme 1 or on the SCART 1 input, as selection of the sources is not possible thereafter in service mode.
3. The functions that can be adjusted (listed below) are selected using the **P+** and **P-** buttons of the remote control and the adjustments then made with the **Volume  $\pm$**  buttons. It is advisable to make a note of initial values before making any changes so that these can be restored if necessary.

In the event of replacing the NVM memory or the microprocessor, it is essential to make all the adjustments accessible in service mode, since the replacement memory is supplied without any prior programming and a new microprocessor requires a new initialization.

### Option bytes (Opx)

The correct values to set for each appliance are given on the label at the back cover alongside the letters **Op1**, **Op2**, **Op3**.

### Initialization (INIT CTV 831 x.x)

The initialization procedure, which also indicates the software version for the microprocessor, is enabled with the **Volume +** button and must be carried out whenever the NVM memory or the microprocessor is replaced. Bear in mind that initialization has the effect of erasing all data from the memory except for the bytes option.

### Control bytes (Cox)

These are control registers that must be set as follows:

Co2	96
Co3	27
Co4	00

### Screen grid voltage (Vg2 Test)

Having selected the function, press the **Volume+** button: a luminous horizontal line appears in the middle of the screen. Adjust potentiometer G2 on the EHT transformer so that the line is just visible (in a dimly lit room). Then press **Volume-** and wait for a few seconds until service mode is restored.

### IF video setting (Ifxx AFCxx)

This adjustment requires special equipment and will be needed only for the ICC2 N1 version, which is also recognizable by the presence of the LC7 coil. If the coil is present, adjust IF and IFP to the values given on the label affixed to the left side of main PCB so that a suitable approximation is achieved.

If the coil is not present, adjust as follows:

IF	50	
IFP	50	(this item is accessible for multistandard appliances only, provided that a France/AM/VHF-L mode signal is memorized in the programme 1 position).

### **AGC tuner setting (AG)**

With a signal of 1 mV applied to the aerial input on a UHF channel, adjust to 4 Vdc at pin 1 of the tuner.

### **Setting the luminance/chrominance delay (Yx)**

The delay must be adjusted to the following values:

Yp	18	(PAL)
Ys	30	(SECAM)
Yn	20	(NTSC)
Yo	22	(SCART)

The Yn function is only accessible if the signal is NTSC coded (**standard accepted only by SCART**).

### **Audio stereo A2 decoder (SA/LA)**

The SA and LA functions allow adjustment of the separation between the right and left audio channels and of the respective levels. An RF stereo generator is therefore required. Disconnect modulation to the left hand channel and adjust LA to give 1.4 Vpp at pin 1 of the SCART 1 connector. Then adjust SA for the minimum residual signal at pin 3 of SCART 1. If a stereo generator is not available, set LA to 01 and SA to 0B to obtain a fair approximation.

### **Horizontal geometry (HSH/EW/PW/CP/TC)**

There are two groups of these functions, one for 4:3 format (suffix 4) and one for 16:9 format (suffix 16), both of which must be adjusted because they are used in the zoom function (4:3 tubes included). The functions of the single parameters are as follows:

HSH	Horizontal shift
EW	Horizontal amplitude
PW	Parabola correction
CP	Corner parabola correction
TC	Trapezium correction

In the case of 4:3 format picture tubes, enter EW16 = 3F to ensure proper zooming.

### **Vertical geometry (VS/VA/VSH/SC)**

Vertical geometry is adjusted starting with the VS (vertical slope) function, which is set so that the central horizontal line of the test signal is exactly at the boundary between the visible image and the black part below and **must not then be changed again**. The functions of the single parameters are as follows:

VS	Vertical slope
VA	Vertical amplitude
VSH	Vertical shift
SC	Vertical S-correction (linearity)

### **White control (WB/WG/WR)**

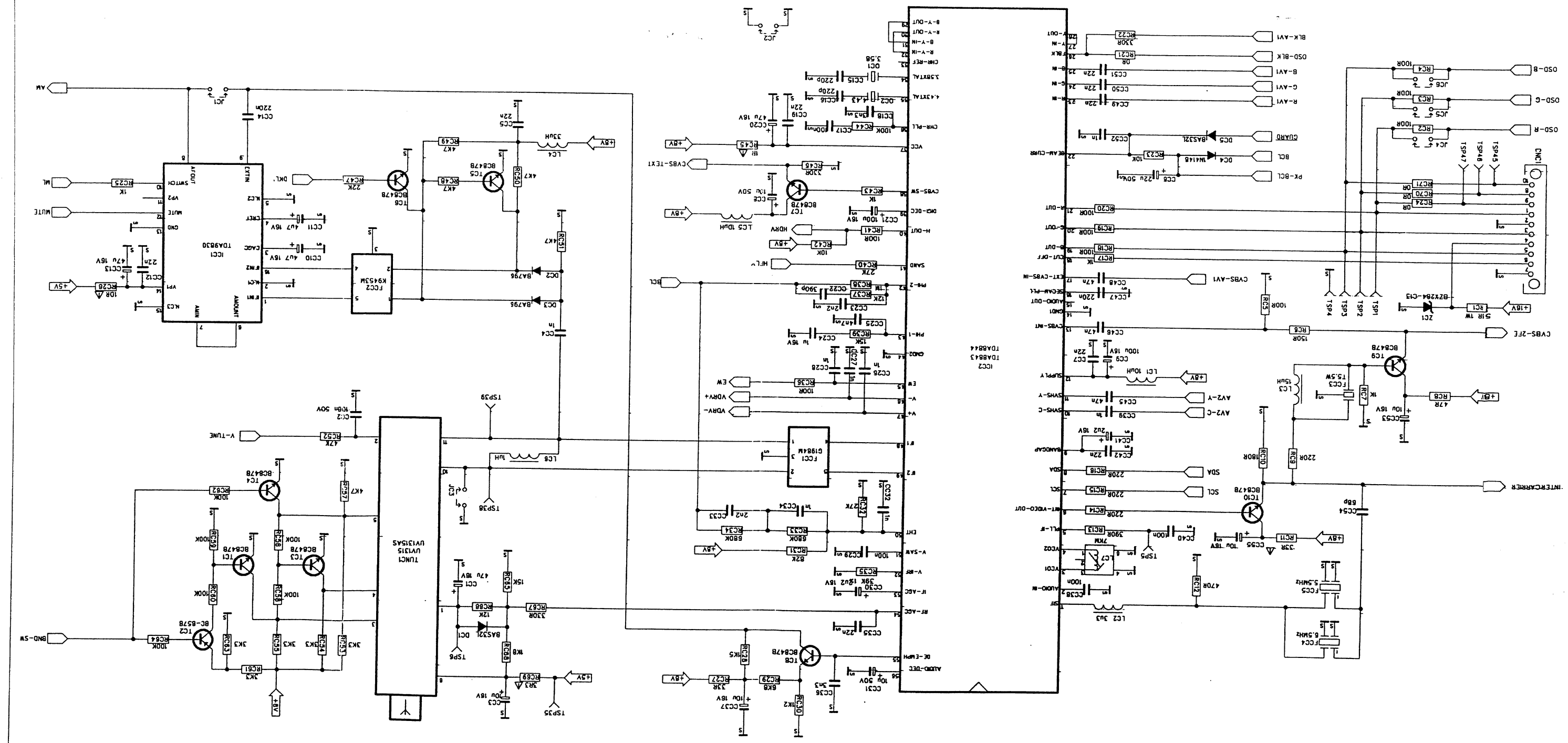
Using a black and white bar signal, adjust to obtain a grey image.

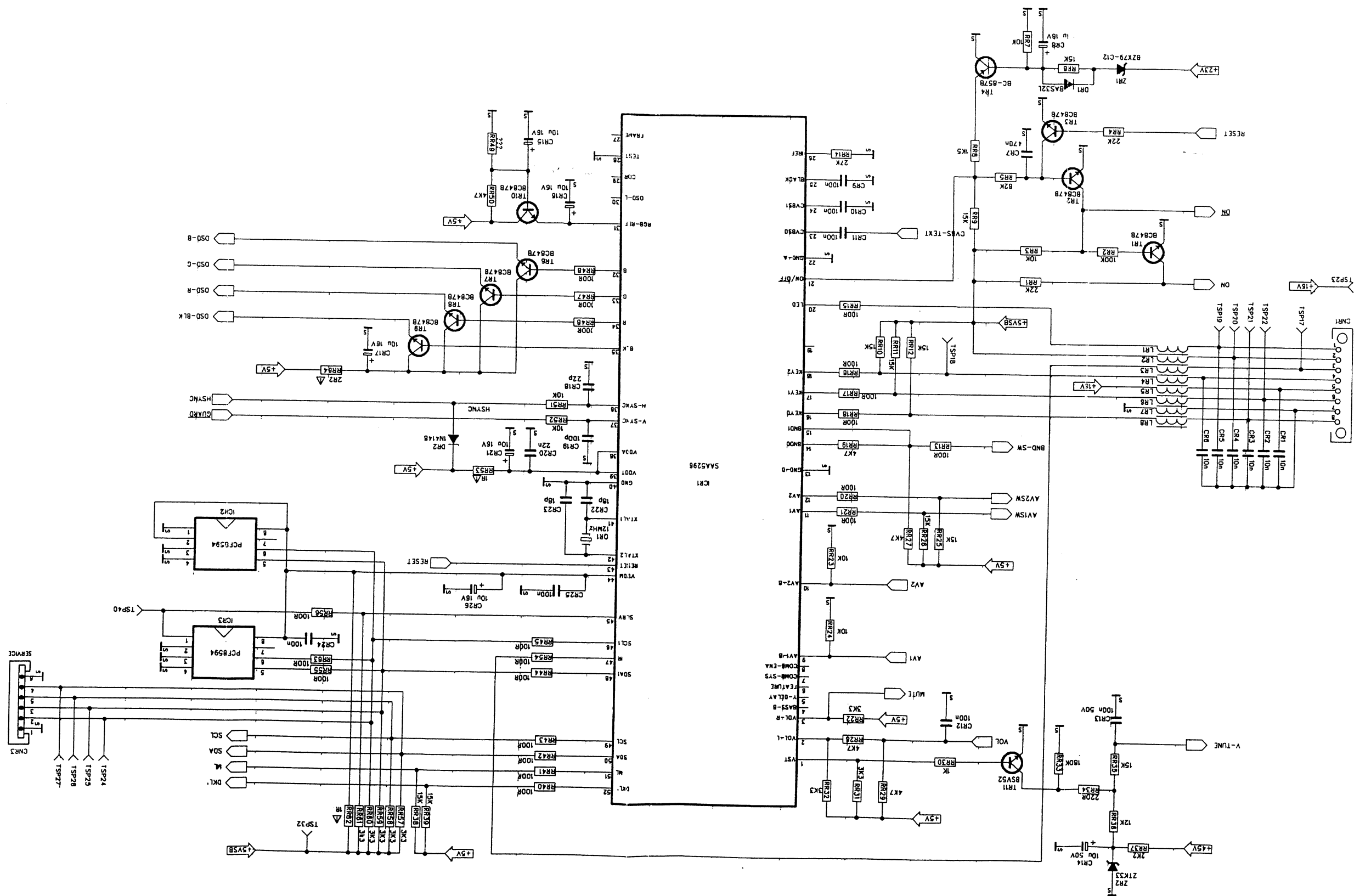
### **On screen (OSD)**

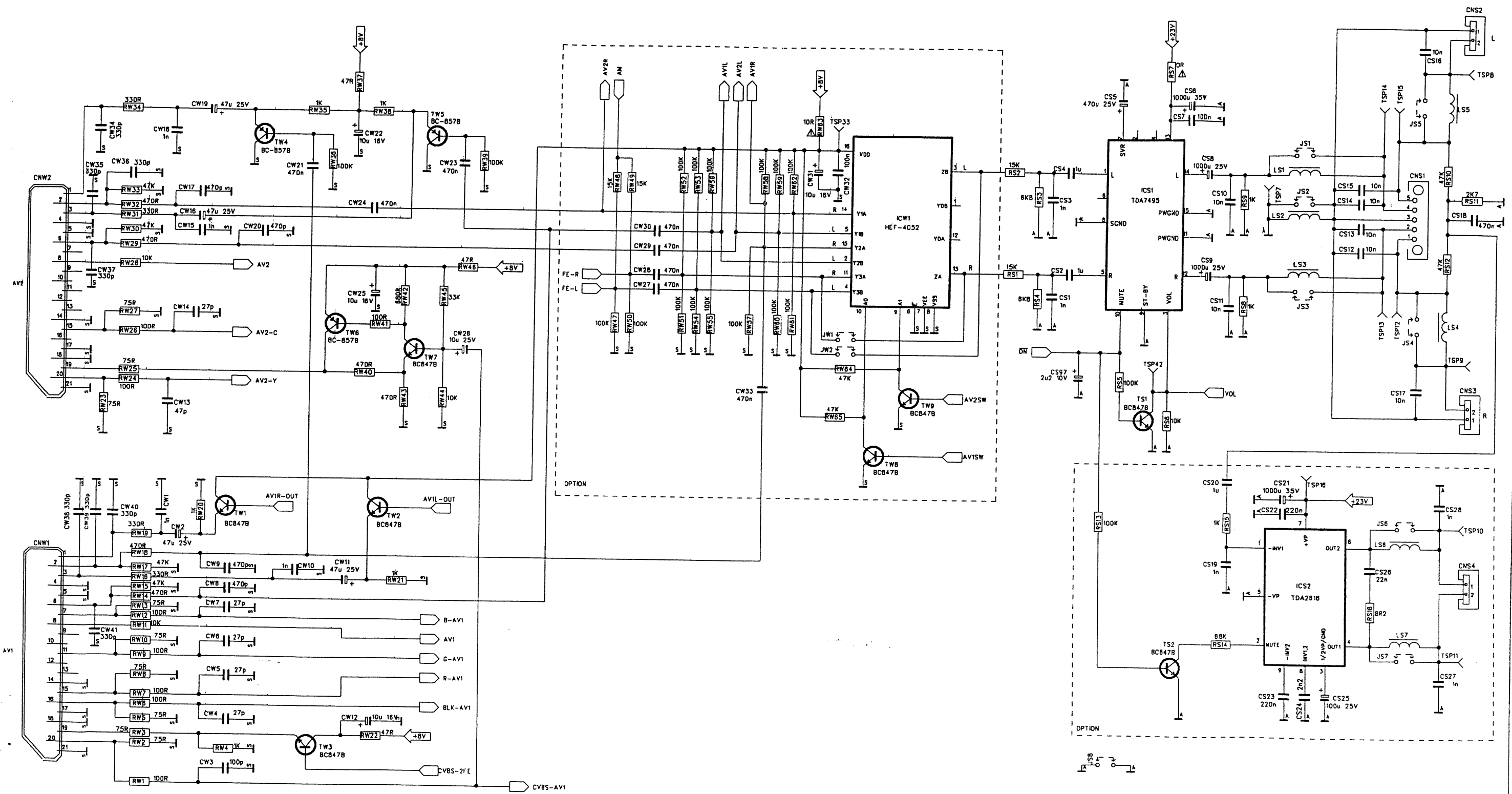
Load the fixed value 3F.

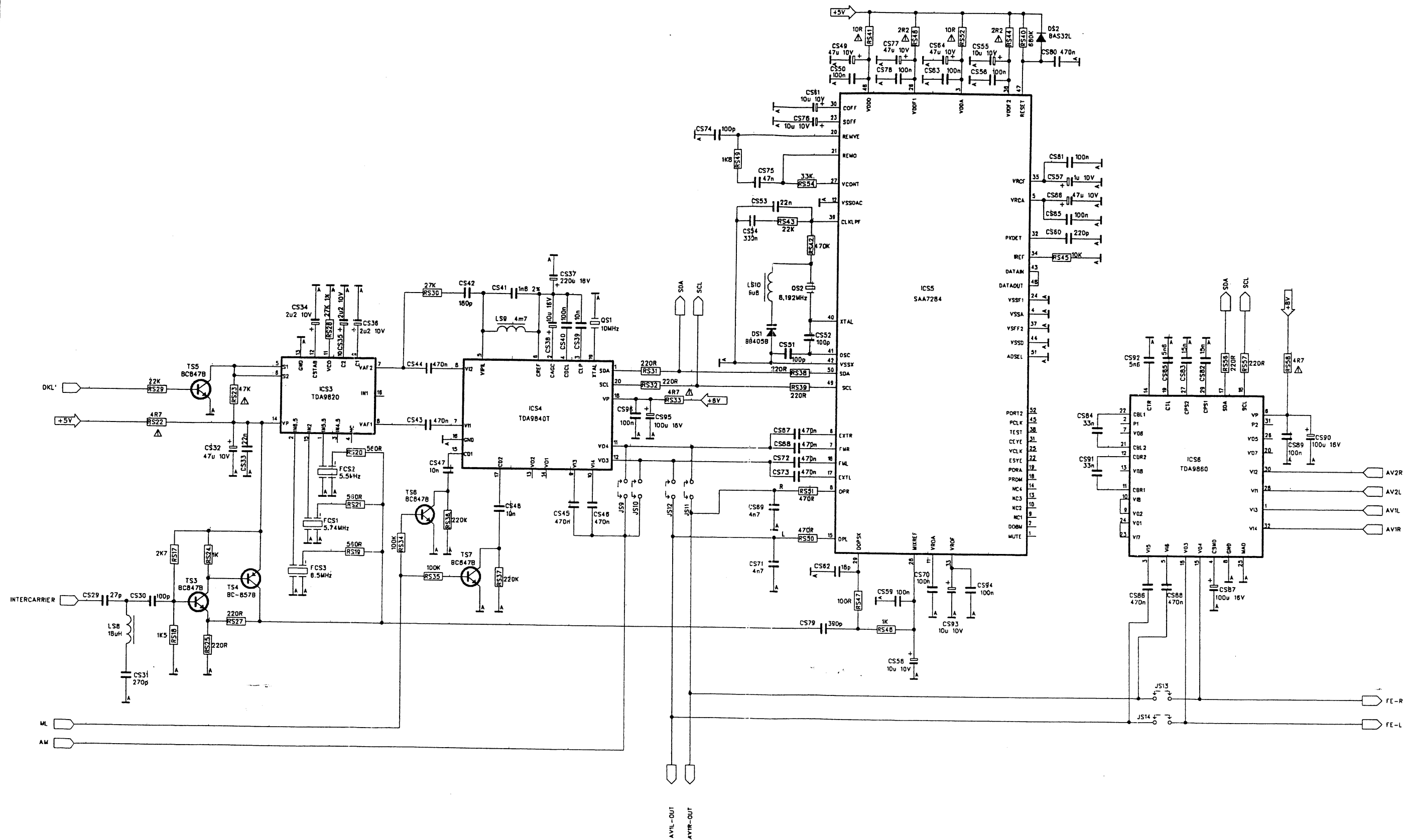
### **Deactivating service mode**

Once all the necessary adjustments have been made, press TV or MENU OFF on the remote control to save all the changes and return the appliance to normal operating mode.



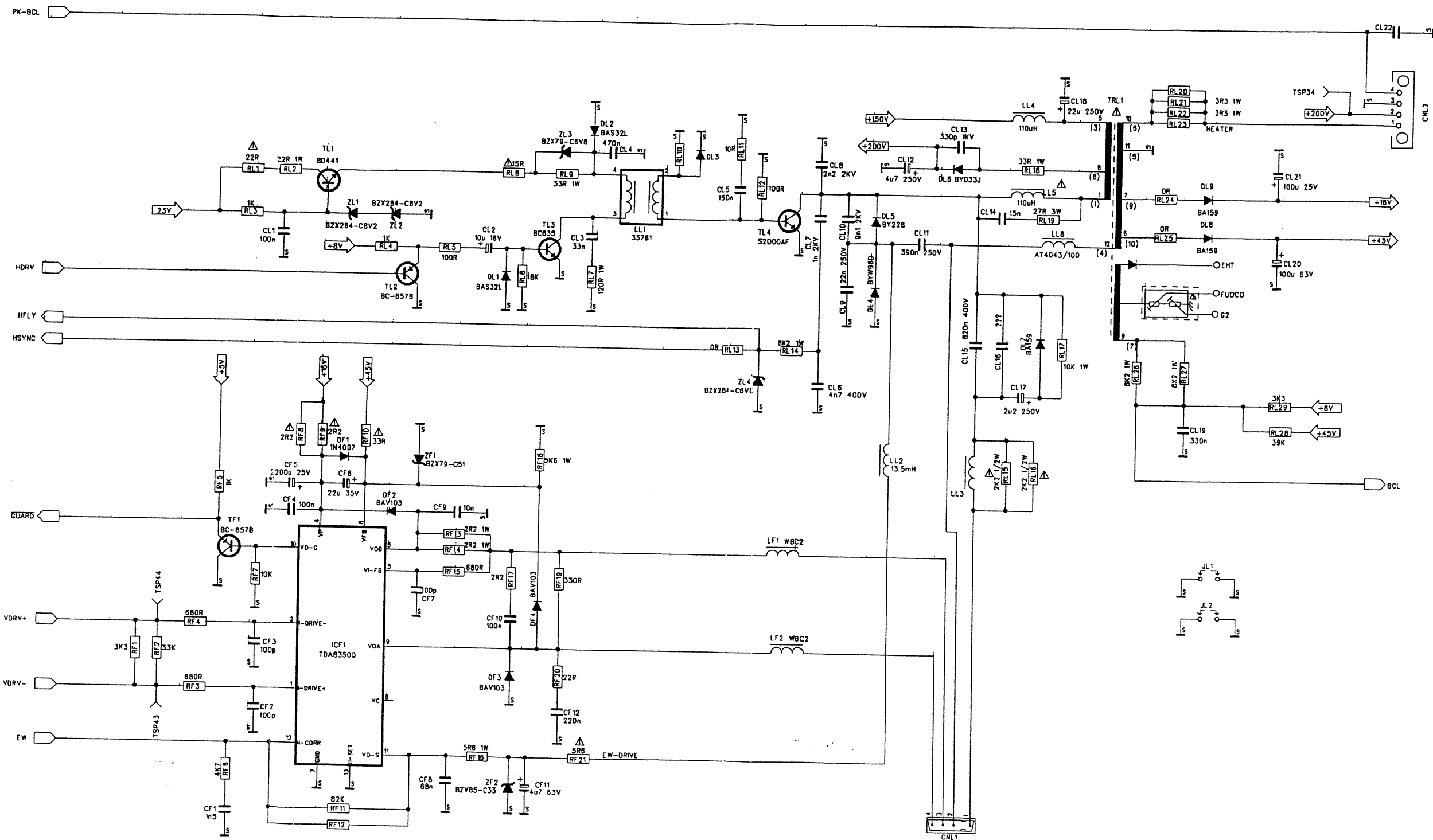












# Spare parts list

## Ersatzteilliste

Chassis Professional 4400

Ref.	Part No.		
Pos.	ET-Nr.	Description	Bezeichnung
	S030242209	Condensator 220 nF 250 VAC	Kondensator 220 nF 250 VAC
	S040590509	Condensator 4,7 UF 250 V	Kondensator 4,7 UF 250 V
	S040601009	Condensator 100 UF 250 V	Kondensator 100 UF 250 V
	S040779229	Condensator 2,2 UF 385 V	Kondensator 2,2 UF 385 V
	S040781509	Condensator 150 UF 385 V	Kondensator 150 UF 385 V
	S044010109	Fusible resistor 1 Ohm	Sicherungswiderstand 1 Ohm
	S044010479	Fusible resistor 4,7 Ohm	Sicherungswiderstand 4,7 Ohm
	S044011009	Fusible resistor 10 Ohm	Sicherungswiderstand 10 Ohm
	S044011509	Fusible resistor 15 Ohm	Sicherungswiderstand 15 Ohm
	S044013309	Fusible resistor 33 Ohm	Sicherungswiderstand 33 Ohm
	S047501009	Fusible resistor 1 Ohm SMD	Sicherungswiderstand 1 Ohm SMD
	S047502209	Fusible resistor 2,2 Ohm SMD	Sicherungswiderstand 2,2 Ohm SMD
	S047504709	Fusible resistor 4,7 Ohm SMD	Sicherungswiderstand 4,7 Ohm SMD
	S047510009	Fusible resistor 10 Ohm SMD	Sicherungswiderstand 10 Ohm SMD
	S048002209	Fusible resistor 2,2 Ohm	Sicherungswiderstand 2,2 Ohm
	S048222009	Fusible resistor 2,2 KOhm	Sicherungswiderstand 2,2 KOhm
VR37	S053051009	Safety resistor 1 MOhm VR37	Sicherheitswiderstand 1 MOhm VR37
	S053210709	Safety resistor 4,7 MOhm VR6B	Sicherheitswiderstand 4,7 MOhm VR6B
	S053910279	Wire wound resistor 27 Ohm 3W	Drahtwiderstand 27 Ohm 3W
	S054000159	Wire wound resistor 0,15 Ohm 3W	Drahtwiderstand 0,15 Ohm 3W
	S054368009	Resistor 68 KOhm 2W	Widerstand 68 KOhm 2W
	S055492279	Wire wound resistor 27 KOhm 9W	Drahtwiderstand 27 KOhm 9W
	S055610829	Wire wound resistor 8,2 KOhm 11W	Drahtwiderstand 8,2 KOhm 11W
	S058590209	NTC resistor 4,7 Ohm	NTC Widerstand 4,7 Ohm
	S058591909	PTC resistor 20 A	PTC Widerstand 20 A
	S061281059	Diode BAV 103-GS18	Diode BAV 103-GS18
	S061284619	Diode BA 159	Diode BA 159
	S061296509	Diode BB 405B,153	Diode BB 405B,153
	S061299009	Diode BYT 11-1000	Diode BYT 11-1000
	S061300509	Diode BYW 29/200	Diode BYW 29/200
	S061302409	Diode BYW 95B	Diode BYW 95B
	S061302609	Diode BYW 95C	Diode BYW 95C
	S061303209	Diode BYW96D	Diode BYW96D
	S061316879	Diode BY228	Diode BY228
	S061401339	Diode BYD33J	Diode BYD33J
	S061517929	Diode BA792/T1	Diode BA792/T1

Ref.	Part No.		
Pos.	ET-Nr.	Description	Bezeichnung
	S061706209	Zener diode BZX284-C6V2,115	Zener Diode BZX284-C6V2,115
	S061706809	Zener diode BZX284-C6V8,116	Zener Diode BZX284-C6V8,116
	S061961709	Zener diode BZV85C33	Zener Diode BZV85C33
	S061971619	Zener diode 6,8 V	Zener Diode 6,8 V
	S061972019	Zener diode 12 V	Zener Diode 12 V
	S061972059	Zener diode 13 V	Zener Diode 13 V
	S062520309	Transistor BC635-16	Transistor BC635-16
	S062531009	Transistor BD441	Transistor BD441
	S062620009	Transistor BSV52,215	Transistor BSV52,215
	S062756109	Transistor S2000AF	Transistor S2000AF
	S062756509	Transistor STP4NA80 FI	Transistor STP4NA80 FI
	S063164529	IC TBA2262	IC TBA2262
	S063174959	IC TDA7495	IC TDA7495
	S063181339	IC TDA8133	IC TDA8133
	S063183509	IC TDA8350Q/N5	IC TDA8350Q/N5
	S063188449	IC TDA8844/N1Pal/Secam	IC TDA8844/N1Pal/Secam
	S063188439	IC TDA88431N1 Pal	IC TDA88431N1 Pal
	S063198219	IC TDA9821-V1	IC TDA9821-V1
	S063198309	IC TDA9830-V1	IC TDA9830-V1
	S063198609	IC TDA9860/V2	IC TDA9860/V2
	S063241339	IC ZTK33-8	IC ZTK33-8
	S063285939	IC PCF8594C-2P/02	IC PCF8594C-2P/02
	S063352979	IC SAA5297PS/065	IC SAA5297PS/065
	S063372849	IC SAA7284ZP/M2	IC SAA7284ZP/M2
	S063411019	IC TCDT1101GB	IC TCDT1101GB
	S063598409	IC TDA9840T/V2,118	IC TDA9840T/V2,118
	S065621409	Flyback transformer 110	Zeilentrafo 110
	S065708009	Power switch transformer	Trafo Schaltnetzteil
	S066541709	Line filter	Netzfilter
	S066544009	Line drive transformer	Trafo H-Treiber
	S066900159	Quarz 3,58 MHZ	Quarz 3,58 MHZ
	S066900259	Quarz 4,43 MHZ	Quarz 4,43 MHZ
	S066900369	Quarz 8,192 MHz	Quarz 8,192 MHz
	S066900409	Quarz 10 MHz	Quarz 10 MHz
	S066901209	Quarz 12 MHz	Quarz 12 MHz
	S067071009	E/W Coil	Ost/West Spule
	S067081009	Bridge coil	Brückenspule
	S067081419	Linearity coil	Linearitätsspule
	S069023109	Tuner UV 1315 AS	Tuner UV 1315 AS
	S087170009	Chassis holder side	Chassishalter Seite
	S087170509	Chassis holder front	Chassishalter Front
	S087174409	Chassis rear connector cover	Buchsenplatte



# Spare parts list Ersatzteilliste

TV 790

## Chassis Professional 4400

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